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**Question Paper Code:UA303**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Professional Elective

Agricultural Engineering

21AGV303 - PROTECTED CULTIVATION

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. What type of greenhouse is constructed on hilly terrain? CO1-U  
(a) Uneven span type green house                      (b) Even span type green house  
(c) Lean to type green house                              (d) Ridge and furrow type GH
2. The soil pH should range between.....for effective greenhouse cultivation CO1 - U  
(a) 6.0–7                      (b) 6.0–6.5                      (c) 5.0–6.5                      (d) 5.0–5.5
3. ....is the sides of the greenhouse join the roof of the greenhouse. CO1 - U  
(a) Eave                      (b) Truss                      (c) Purlin                      (d) Ridge
4. ....should be placed at least 30m away on North West side of the green house CO1 - U  
(a) Wind break                      (b) Side wall                      (c) Side post                      (d) Both (a) and (b)
5. Which of the following is NOT an objective of pruning? CO1 - U  
(a) Promoting plant health                                      (b) Enhancing plant aesthetics  
(c) Controlling pest and disease                              (d) Inhibiting plant growth
6. Which horticultural practice involves gently bending stems or branches to shape plant growth? CO1 - U  
(a) Mulching                      (b) Bending                      (c) Defoliation                      (d) Training

7. Common name of chrysanthemum is ..... CO1 - U  
 (a) Guldaudi (b) Glory of east (c) Autumn Queen (d) All the above
8. Fruits of rose is called as CO1 - U  
 (a) Berry (b) Capsule (c) Hips (d) Pod
9. Which flower crop is commonly grown in protected cultivation for its long-lasting blooms and is often used in bouquets and floral arrangements? CO1-U  
 (a) China aster (b) Asiatic lilies (c) Cut foliages (d) Fillers
10. Which flower is known for its wide range of colors and long vase life, making it popular in floral arrangements? CO1-U  
 (a) Gerbera (b) Jasmine (c) Lily of the valley (d) Carnation

PART – B (5 x 2= 10Marks)

11. What types of crops are commonly grown in greenhouses? CO1 -U
12. What is the common framing materials used in constructing greenhouses? CO1 -U
13. What is the difference between disbudding and deshooting? CO1 -U
14. Explain about the sucking pests of chilli? CO1 -U
15. What are the ideal soil and climatic conditions required for rose cultivation? CO1 -U

PART – C (5 x 16= 80Marks)

16. (a) Explain the concept of greenhouse technology and how it differs from traditional soil-based cultivation methods. CO2- App (16)  
 Or  
 (b) Describe the benefits of using greenhouses in farming and how they improve crop growth. CO2- App (16)
17. (a) Explain the concept of pinching in plant care and list the various types of pinching techniques CO1- U (16)  
 Or  
 (b) Examine advanced horticultural techniques essential for cultivating flower and vegetable crops. CO1- U (16)

18. (a) Describe the types of materials suitable for construction of polyhouse and why they are suitable for this environment. CO1- U (16)
- Or
- (b) Discuss the materials commonly used in the construction of greenhouses. CO1- U (16)
19. (a) Describe the protected cultivation techniques to optimize cucumber production CO1- U (16)
- Or
- (b) Compare and contrast the post-harvest handling techniques used for different vegetable crops. CO1- U (16)
20. (a) Describe the advantages of protected cultivation techniques, such as greenhouse cultivation and shade netting for optimizing jasmine flower production. CO1- U (16)
- Or
- (b) How do protected cultivation techniques contribute to the successful growth of tuberose flowers? CO1- U (16)